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職前化學教師教學思考之個案研究

A Preservice Chemistry Teacher's Thinking of Teaching- Case study

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中文摘要

本研究以個案研究法，依據 Clark & Peterson (1986)教師思維模式，探究一位職前化學教師—秋蓉在大四實習課期間（包括微試教學與一個月校外教學實習），其教學前、教學過程中與教學後之思考內容，並歸納出影響上述思考內容之因素。研究發現，職前化學教師在教學過程中的思考，是以課程中所提及的概念，做有系統與組織的講解。在教學中的思考要以陳述組織好的概念和搜尋學生的反應做為推動教學流程的依據。至於教學後的反省，則以自我教學適任性為考量。影響職前教師教學思考與決策之因素包含教師的教學信念與在教學中所面臨的兩難情境。而兩難情境包含秋蓉的教學信念與進度的限制，與協周教師?學法的差異，理想中學生的學習與實狀況的出入。雖有這些認知衝突的情境，但亦提供秋蓉在教學上做思考，反省與學習的機會。最後由研究中可看出，在實際的教學情境中，職前化學教師學到了實際學的反應，並學習與體認學科教學知識之重要性。

關鍵字：職前科學教師；教師思維；教師信念；教師學習；科學師資培育

Abstract

This study followed Clark and Peterson's teacher thinking model (1986), attempted to explore a prospective chemistry teacher's (Chuo-yun) preactive, interactive and post-active thoughts and decision, during her one year practicum course. Research also tried to identify the factors which influenced Chuo-yun's thoughts of teaching, and to describe any changes she had after one month practicum experience in a rural junior high school. Case study method was applied in the research. Findings of this study revealed that Chuo-yun's preactive thought were focused on self-centered concept explanation sequence. This teaching sequence is linear-oriented which based on her image of what concept organization is the best way for her students. Her interactive thoughts addressed on teaching pre-designed organization of concepts and on seeking students' responses. Her postactive thoughts addressed on her own teaching competency. Two factors which influenced her thoughts of teaching, one was her beliefs of science teaching, another was the dilemma she faced during teaching experience. The study suggested that the preservice science teacher learned of teaching from real classroom teaching experience, science teacher preparation program should provide early-field experience to the preservice science teachers, and also need to address the importance of pedagogical content knowledge in the training program.

Key words : Preservice science teacher; Teacher belief; Teacher thinking; Teacher learning; Science teacher education